# IN THE UNITED STATES DISTRICT COURT
## FOR THE EASTERN DISTRICT OF TEXAS
## MARSHALL DIVISION

| | | |
|---|---|---|
| **IMPLICIT, LLC,** | § | |
| | § | |
| *Plaintiff,* | § | |
| | § | **Civil Action No. 2:18-cv-53-JRG** |
| **v.** | § | **LEAD CASE** |
| | § | |
| **NETSCOUT SYTEMS, INC.,** | § | **JURY TRIAL DEMANDED** |
| | § | |
| *Defendant.* | § | |

## PLAINTIFF IMPLICIT, LLC'S
## OPENING CLAIM CONSTRUCTION BRIEF

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# TABLE OF AUTHORITIES

Pursuant to Local Patent Rule 4-5(a), Plaintiff Implicit, LLC ("Implicit") respectfully submits this Opening Claim Construction Brief requesting that the Court resolve certain claim construction disputes between Implicit and Defendants NetScout Systems, Inc. ("NetScout") and Sandvine Corporation ("Sandvine") (collectively "NetScout/Sandvine" or "Defendants").

## I.      INTRODUCTION

Implicit alleges infringement of three U.S. Patents: No. 8,694,683 (the "'683 Patent"), No. 9,270,790 (the "'790 Patent"), and No. 9,591,104 (the "'104 Patent") (collectively, the "Asserted Patents" or "Balassanian Patents"). The Asserted Patents are attached hereto as Exhibits 1, 2, and 3.  The Asserted Patents are part of the Demultiplexing (or "Demux") family of patents.  The '683 Patent is entitled "Method and System for Data Demultiplexing."  The application leading to the '683 Patent was filed on June 6, 2013, and the patent issued on April 8, 2014.  The '790 Patent is entitled "Method and System for Data Demultiplexing."  The application leading to the '790 Patent was filed on March 31, 2014, and the patent issued on February 23, 2016.  The '104 Patent is entitled "Method and System for Data Demultiplexing."  The application leading to the '104 Patent was filed on February 22, 2016, and the patent issued on March 7, 2017.  All Asserted Patents claim priority to and are continuations of United States Patent No. 6,629,163 (the "'163 Patent"). The application leading to the '163 Patent was filed on December 29, 1999.  The '163 Patent was subject to Reexamination.

## II.     TECHNOLOGY OVERVIEW

Having conducted two prior claim construction hearings and two prior pre-trial hearings, the Court is very familiar with the technology of the Asserted Patents.  Detailed summaries of the technology can be found in these prior rulings.  Additionally, more detailed summaries of the technology exist in prior claim construction briefs.  *See, e.g., Implicit, LLC v. Huawei Techs. USA,*

*Inc.*, No. 6:17-CV-182, Dkt. No. 101 at 2-4 (Implicit's Opening Claim Construction Brief).  In light of the Court's familiarity with the technology, only a brief overview is presented here.

The Balassanian Patents represent a new approach to computer networking.  Computers process network data using sequences or strings of software routines, sometimes called components or modules.  '683 Patent at 1:45-50.  In the late 1990s, computer systems typically used "pre-defined configuration information to load the correct combination of conversion routines for processing data." *Id.* at 1:48-50.  The variety of data formats and, therefore, the combinations of routines necessary to process them grew rapidly in the late 1990s.  *Id.* at 1:24-31.  These computer systems also used a "process-oriented approach" to processing data with these conversion routines in which a separate process for each conversion routine needed to take place." *Id.* at 1:48-54.  The "overhead of statically providing each possible series of conversion routines" was therefore very high.  *Id.* at 1:57-59.  In the 1990s, Mr. Balassanian saw the need for and conceived of a new technique to "dynamically identify[] a series of conversion routines for processing data" and "to store the series of conversion routines so that the series can be quickly identified when data is received." *Id.* at 2:4-11.

The Balassanian Patents claim an apparatus for dynamically identifying the sequence of routines by creating a path that includes a data structure indicating a sequence of routines for processing data packets, and then storing that path to process subsequently received packets of the same message.  Claim 1 of the '683 Patent is exemplary:

What is claimed is:

20   1. A first apparatus for receiving data from a second apparatus, the first apparatus comprising:

a processing unit; and

a memory storing instructions executable by the processing unit to:

25   create, based on an identification of information in a received packet of a message, a path that includes one or more data structures that indicate a sequence of routines for processing packets in the message;

store the created path; and

30   process subsequent packets in the message using the sequence of routines indicated in the stored path, wherein the sequence includes a routine that is used to execute a Transmission Control Protocol (TCP) to convert one or more packets having a TCP format into

35   a different format.

'683 Patent at 14:19-35.

## III.   <u>RELATED LITIGATION</u>

The Court previously construed terms in the '683 Patent and the '790 Patent in two prior cases: *Implicit, LLC v. Trend Micro, Inc.*, No. 6:16-CV-80, Dkt. No. 115, 2017 WL 1190373 (E.D. Tex. Mar. 29, 2017) (Gilstrap, J.) ("*Trend Micro*") and *Implicit, LLC v. Huawei Technologies USA, Inc.*, No. 6:17-CV-182, Dkt. No. 101 (E.D. Tex. Mar. 6, 2018) (Gilstrap, J.) ("*PAN*").[1]  The Northern District of California has also construed the '683 Patent in *Implicit Networks, Inc. v. F5 Networks, Inc.*, No. 3:14-CV-2856, Dkt. No. 57, 2015 U.S. Dist. LEXIS 60197 (N.D. Cal. May 6, 2015) (Illston, J.) ("*F5 Networks II*").  Additionally, the Northern District of California construed the parent '163 Patent in an earlier case. *Implicit Networks, Inc. v. F5 Networks, Inc.*, No. 3:10-CV-3365, Dkt. No. 93, 2012 U.S. Dist. LEXIS 27238 (N.D. Cal. Feb. 29, 2012) (Illston, J.) ("*F5*

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[1] At the time of the claim construction hearing, the only remaining defendant in the consolidated action was Palo Alto Networks, Inc.  This case will therefore be referred to as *PAN* rather than *Huawei*.

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*Networks I*").   The Court is very familiar with the *F5 Networks I* and *F5 Networks II* claim

construction rulings and previously provided a detailed account of those rulings in *Trend Micro*.

*Trend Micro*, at 5-6.

In *Trend Micro*, this Court agreed with the analysis in *F5 Networks II* and held that it was

appropriate to limit the claims to dynamic path-conversion embodiments in which the sequence of

routines is not identified (i.e., configured) prior to the arrival of the first packet of a message:

> Ultimately, the teachings of the patents regarding the inventions'
> dynamic-configuration approach, and disparagement of the prior-art
> static-configuration approach, explain that the sequence of
> conversion routines that together process the packets "cannot be
> configured before the first packet of the message is received." *See*
> '163 Patent File Wrapper September 1, 2009 Amendment and
> Response to Office Action in Ex Parte Reexamination 90/010,356
> at 20 (Dkt. No. 103-1 at 20); see also, '163 Patent File Wrapper
> October 23, 2009 Interview Summary in Ex Parte Reexamination
> 90/010,356 at 10 (Dkt. No. 103-4 at 10) ("'163 spec states sequence
> of components is identified when first packet arrives and disavows
> prior art 'predefined configuration' (e.g., 1:41-43, 1:64-66, 2:40-
> 45)"). It is appropriate to limit the claims accordingly.

*Trend Micro* at 18.  The Court in *Trend Micro* construed the term "sequence of routines" to mean

"an ordered arrangement of software routines that was not identified (i.e., configured) prior to

receiving a first packet of the message."

In *PAN*, the parties presented the *Trend Micro* construction for "sequence of routines" as

an agreed construction, and the Court adopted same.  *PAN* at 8, 30.

## IV.    AGREED CONSTRUCTIONS

The Parties present the single following construction as an agreed construction and request

that the Court enter an order adopting same:

"message" means "a collection of data that is related in some way, such as stream of video

or audio data or an email message."

## V.     ARGUMENT

### A.     sequence of [two or more] routines / list of conversion routines

| Plaintiff's Proposed Construction | Defendants' Proposed Construction |
|---|---|
| an ordered arrangement of [two or more] software routines that was not *identified (i.e., configured) prior to* receiving a first packet of a message | an ordered arrangement of two or more software routines that was not *selected (or found or picked) from a finite set of possible arrangements which were created* before receiving a first packet of the message |

Implicit proposes that the Court adopt the same construction in this case that it adopted in

*Trend Micro* and *PAN*.  Innumerable claim construction briefs, summary judgment motions,

motions to strike infringement contentions, and motions to strike expert opinions have been

devoted to litigating what this term means.[2]  The court construed this term in *Trend Micro*.  In

*PAN*, the parties proposed the construction as an agreed construction, and the Court adopted it.

After eight years of litigation, consensus on this term had arrived—or so it appeared.  NetScout

and Sandvine offer a new twist on what the claimed "sequence of routines" means, or rather cannot

mean.  In doing so, they stretch the bounds of logic and reality.  The NetScout/Sandvine

construction seeks to exclude any arrangement that was possible prior to the arrival of the first

packet.  In doing so, NetScout and Sandvine seek to limit the claims to an impossibility.[3]  There

is no system that would satisfy this claim element if the Court were to adopt the NetScout/Sandvine

construction.  Most importantly, there is no support in the intrinsic or extrinsic record to extend

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[2] *See, e.g.*, *F5 Networks II* at 11-14; *id.*, Dkt. No. 205 at 24-27; *Trend Micro* at 13-20. *PAN,* Dkt. Nos. 202 (motion to strike expert and infringement theory on "sequence of routines" element); 219 (response); 225 at 8-10 (reply); 201 at 16-28 (motion for summary judgment on non-infringement based on "sequence of routines"); 220 at 16-23 (response); 225 at 8-10 (reply).

[3] Notably, this appears to be the same or at least a similar argument to one PAN made in a motion for summary judgment.  *PAN,* Dkt. Nos. 201 at 16-28 (motion for summary judgment on non-infringement based on "sequence of routines"); 220 at 16-23 (response); 225 at 8-10 (reply).

the scope of the Mosberger disclaimer to exclude possible arrangements, a construction that would leave Implicit with claims that only covers impossible arrangements.

The Court's prior construction circumscribes the scope of the Mosberger disclaimer to exclude sequences of routines identified or configured before the arrival of the first packet of a message. *Trend Micro* at 17.  Nothing in the claims or specification discusses or characterizes the claimed sequence of routines as excluding possible arrangements of routines or requiring impossible arrangements.  Nor is there any reference in the prosecution histories of the patents to support for the concept that the patentee disclaimed "a finite set of possible arrangements." Whether the invention identifies a sequence that could have been possible prior to the arrival of the first packet was not the basis for distinguishing Mosberger.  Rather, Mosberger utilized software routines configured at build-time, not at run-time after the first packet of a message is received, as claimed in the Asserted Patents.  As a result, Mosberger was a static path-creation system, whereas the Asserted Patents disclose a dynamic path-creation system. *Trend Micro* at 18 (citing '163 Patent File Wrapper September 1, 2009 Amendment and Response to Office Action) (finding that "the teachings of the patents regarding the inventions' dynamic-configuration approach, and disparagement of the prior-art static-configuration approach, explain that the sequence of routines that together process the packets 'cannot be configured before the first packet of the message is received.'"). The NetScout/Sandvine construction excludes possible sequences of routines, even if they are identified after first packet arrival.  Such a notion was not contemplated by the Mosberger disclaimer and should not be inferred without a clear and unmistakable intent by the inventors. *Mass. Inst. of Tech. v. Shire Pharms., Inc.*, 839 F.3d 1111, 1119 (Fed. Cir. 2016).

The only conceivable system possibly covered by the NetScout/Sandvine construction would be a system that creates a new routine after receipt of a packet.  Logically, only a routine

created out of whole-cloth after first-packet arrival would qualify as "not selected (or found or picked) from a finite set of possible arrangement which were created before" first packet arrival. Even if such a system was possible, there is no support to limit the claims to that system.

### Not identified (i.e., configured) vs. not selected.

The NetScout/Sandvine construction posits that the sequence of routines cannot be "selected" as opposed to "identified (i.e., configured)." The word "identify" or variations thereof appears no less than 75 times in the '683 Patent in relation to the sequence of routines. There is no indication in either the specification or prosecution history that the sequence of routines cannot be selected. Presumably, NetScout and Sandvine attribute some significance to the notion that the sequence of routines cannot be "selected" as opposed to not merely "identified (i.e., configured)," but that notion appears motivated by something other than the intrinsic record. *See, e.g.,* '683 Patent at 2:44-49 ("the conversion system in one embodiment searches for and identifies a sequence of conversion routines").

### "Possible arrangements which were created" is internally inconsistent.

The NetScout/Sandvine construction contains an internal inconsistency that on its face renders the disputed portion of the construction superfluous. Such a flaw further sows ambiguity and confusion into a process intended to have the opposite effect. The proposed construction creates a set of software arrangements defined as any "possible arrangement" and excludes that set as preconfigured. But the NetScout/Sandvine construction also states that the "possible arrangements *were created* before receiving a first packet of the message." If the arrangements are already created, there is no need to define them as possible. On the other hand, if the intent is to exclude merely possible arrangements, then there is no need to also define them as "already created." Thus, the NetScout/Sandvine construction creates confusion and ambiguity about

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whether the set of arrangements excluded from the claims is merely possible or was in fact created before arrival of the first packet.  Of course, if all the construction intends to exclude is pre-existing paths like Mosberger (e.g., paths that were created before arrival of the first packet), then Court's prior construction resolves that issue.  Due to its inherent confusion and conflicting language, the Court should reject the NetScout/Sandvine construction in favor of its prior construction.

## B.     list of conversion routines

| Plaintiff's Proposed Construction | Defendants' Proposed Construction |
| --- | --- |
| an ordered arrangement of [two or more] software routines *for changing the form of data* and that was not identified (i.e., configured) prior to receiving a first packet of a message | an ordered arrangement of two or more software *conversion* routines that was not selected (or found or picked) from a finite set of possible arrangements which were created before receiving a first packet of the message |

The Parties' competing proposals for "list of conversion routines" present the same issue for resolution as the prior term.  With one exception, resolution of the prior term should resolve this dispute as well.  As italicized in the chart above, Implicit proposes "software routines *for changing the form of data*," and the NetScout/Sandvine construction simply says "software *conversion* routines."  Implicit is willing to agree to the NetScout/Sandvine language "software conversion routines" to resolve this issue.  The remainder of the dispute will be resolved by the prior term, and Implicit incorporates those arguments by reference.

## C.     state information

| Plaintiff's Proposed Construction | Defendants' Proposed Construction |
| --- | --- |
| information specific to a software routine for a specific message that is not information related to an overall path | information specific to a software routine for a specific message *that is maintained for all packets of the message and* that is not information related to an overall path |

In *PAN*, the Court construed state information to mean: "information specific to a software routine for a specific message that is not information related to an overall path."  *PAN* at 23.  The

Court in *F5 Networks I* adopted the same construction. *F5 Networks I* at 13-14.  Implicit proposes that the Court again adopt its prior construction.   The NetScout/Sandvine proposal adds an additional limitation that the information "is maintained for all packets of the message."  That limitation should be rejected.

The term "state information" appears in the '683 Patent, claim 5 and the '104 Patent, claims 1, 10 and 16.  Nothing in the language of the claims themselves requires that state information be maintained for all packets of the message.  The only requirement in the claims is that the state information be associated with or specific to a message.  *See* '683 Patent, claim 5 ("state information is specific to the message"); '104 Patent, claims 1, 10 and 16 ("state information associated with the message").

Similarly, the specification does not contain a definitional statement or clear intent to limit "state information" to information maintained for all packets of the message.  The Abstract of the '163 Patent merely identifies "state information associated with the message."  '163 Patent, Abstract.   Other instances where the specification discusses "state information" similarly contradict the NetScout/Sandvine construction.  '683 Patent at 3:4-5 ("[T]he conversion system maintains state information as an instance or session of the conversion routine.")  Certainly, nothing in the specification prohibits all packets of the message from using state information.  *Id.* at 3:8-9 ("[T]he same state or instance information can be used by all packets of the message.").  But permissible statements should not be used to limit the claims.  *Colucci v. Callaway Golf Co.*, No. 6:08-cv-288, Dkt. No. 89 at 10 (E.D. Tex. Jan. 21, 2010) (Love, M.J.) (citing *Fenner Invs., Inc. v. 3Com Corp.*, No. 6:08-cv-61, 2009 WL 1505407, at *12 (E.D. Tex. May 26, 2009)).

Certain statements from the specification should be read with care and taken in context.  For example, column 3 lines 60-62 states, "[t]he sessions are identified so that each packet is

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associated with the appropriate state information." '683 Patent at 3:60-62.  Should Defendants

rely on this statement, it refers not to maintaining state information for all packets of a message,

but to the general notion that "sessions are identified so that each packet can be associated with

the appropriate state information." *Id.* at 3:60-62.  Finally, nothing in column 5, lines 26-46 or the

discussion of Figure 4 supports the NetScout/Sandvine construction.  The passage merely recites

that conversion routines store their state information (column 5, lines 30-31) and that sessions

"include the protocol and state information associated with that instance of the protocol" (column

5, lines 44-46.).  *Id.* at 5:26-46.

The prosecution history and extrinsic evidence identified by Defendants for their

construction likewise fail to provide the clear and unmistakable support necessary to limit the

claims as they suggest.   A thorough review of the voluminous pages from multiple patent

prosecutions and reexaminations, prior litigation interrogatory responses, claim construction

briefing, and oral arguments cited in Defendants' P.R. 4-3 disclosure fails produce a single clear

and unequivocal statement supporting the NetScout/Sandvine construction.   For these reasons,

Implicit respectfully requests that the Court reject the NetScout/Sandvine construction and adopt

Implicit's proposed construction.

**D.      process / processing . . . packets**

| Plaintiff's Proposed Construction | Defendants' Proposed Construction |
|---|---|
| apply/applying one or more routines to a packet, where at least one such routine is a conversion routine | These claims do not include a system that avoids applying the same processing steps to subsequent packets of a message. |

The issue is whether the Court should construe this term as it has previously or if the Court

should inject a negative limitation absent from the specification.  This term has been construed

and contested multiple times. None of those constructions included the negative limitation that

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Defendants seek here. Indeed, the Court in *Trend Micro* construed this limitation to mean "apply[ing] one or more routines to packets." *Trend Micro* at 20-22. And in *PAN*, after initially disputing the construction during briefing, the parties eventually agreed on the construction proposed by Implicit here. *See PAN*, Dkt. No. 94-1 at 10 n.1. Much like the "sequence of routines" terms above, the parties throughout the related litigations had reached consensus on this term. But no longer. Because Implicit's construction is consistent with the claims, the specification, and the previous claim constructions, the Court should adopt it.

The intrinsic evidence supports Implicit's construction. For starters, the claims expressly describe what the "processing" must include. Depending on the patent and the claim, the processing may require one of several additional limitations:

- "process subsequent packets in the message **using the sequence of routines indicated in the stored path**, wherein the sequence includes a routine that is used to execute a Transmission Control Protocol (TCP) to convert one or more packets having a TCP format into a different format." '683 Patent, claim 1 (emphases added).

- "process subsequent packets of the message **using sessions** specified in the created path." '683 Patent, claim 10 (emphases added).

- "process subsequent packets of the message using the sequence of routines **referenced by the one or more data structures**." '683 Patent, claim 24 (emphases added).

- "process the one or more received packets **using the sequence of routines indicated in the identified path**." '790 Patent, claims 1, 16 (emphases added).

These claims do not restrict the "processing" to "the same type of step"—as Defendants' construction would. Instead, the claims themselves dictate what "processing" must be done.

Further, consistent with Implicit's construction, the specification teaches that routines processing packets include routines that have at least one conversion routine (as opposed to pure compression or encryption routine):

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- "A method and system for **converting a message** that may contain multiple packets from a source format into a target format. When a packet of a message is received, the conversion system in one embodiment searches for and identifies a sequence of **conversion routines** (or more generally message handlers) **for processing the packets of the message** by comparing the input and output formats of the conversion routines." '683 Patent at 2:42-49 (emphases added).

- "That is, the conversion system demultiplexes the messages by receiving the message, identifying the **sequence of conversion routines**, and controlling the processing of each message by the identified sequence." '683 Patent at 2:65-3:1 (emphases added).

- "The forwarding component is responsible for identifying the session of the **conversion routine that should next process the packet** and invoking that conversion routine." '683 Patent at 3:17-20 (emphases added).

- "**The conversion routine processes the packet** and then invokes the message send routine." '683 Patent at 4:32-34 (emphases added).

Like in *PAN*, Implicit's proposal is not that *all* of the routines applied to a packet must be conversion routines, which was at issue in *Trend Micro*. Rather, Implicit's proposal is that "at least one" conversion should be applied, consistent with the specification and this term's previous construction.

Defendants seek to add a requirement to these limitations divorced from the actual language of the claims. Indeed, Defendants' "construction" does not even attempt to construe the words of the limitations. To wit, Defendants' construction does not equate the claimed "process[ing]" to a specific process (*e.g.*, filtering). Nor does it attempt to define the "packet." Defendants' construction has no hook into the words of the claim.

Instead, Defendants' construction is more akin to a confusing global re-write of the asserted claims. Specifically, Defendants' construction adds a confusing double-negative gloss to these limitations—per Defendants, the claims "do **not include** a system that **avoids** applying the **same** processing steps to subsequent packets of a message." But negative limitations are generally

disfavored, and double negative limitations should be doubly disfavored.  Indeed, unpacking this convoluted prose is a multi-step process that requires some mental gymnastics.  First, a "system that avoids applying the same processing steps to subsequent packets of a message" is a system that applies *different* processing steps to subsequent packets.  But there's another negative to wrangle—the "do[es] not include" qualifier that begins Defendants' construction.  Thus, Defendants' construction would seemingly exclude a system that applies different steps for subsequent packets.  In other words, in Defendants' view, only systems that apply the same steps for subsequent packets would read on the claims—albeit by a rewrite of the "processing" limitation.  But the jury will have to jump through several mental hoops to get there.  The point of claim construction is to simplify and explain, not to obfuscate.

Moreover, the use of the word "avoid" in Defendants' construction raises another issue— "avoid" means to keep away from, but *not necessarily exclude*.  For instance, "avoiding" taxes does not mean paying $0 taxes.  So, how many different processing steps must be applied for the system to "avoid" the same processing step?  All of them? Some unlisted percentage?  It is unclear—and the specification never uses the word "avoid" to provide any guidance.  Defendants' construction would make a meaningful infringement analysis difficult. The Court should reject Defendants' construction for this reason alone.

Further, nothing in the specification supports Defendants' gloss.  Defendants' citations from their 4-2 disclosure either contain no such "avoidance" restriction.  *See, e.g.,* '683 Patent at 2:58-61 ("When subsequent packets of the message are received, the conversion system identifies the sequence and queues the packets for pressing by the sequence."); *id*. at 9:29-32 (describing path-hopping). Further, even if Defendants' P.R. 4-3 citations to the '211 Patent did disclose Defendants' negative limitation—which they do not—those disclosures are discussing example

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embodiments—not the "invention." *See* U.S. Pat. No. 7,730,211 at 10:20-45 (describing an "example implementation"), 11:47-12:8 (same). It is black letter law that the claims should not be so limited.

Defendants' only apparent hook to the record is a statement made in providing an overview of a prior art reference—Kerr—during re-examination of the '163 parent Patent:

> Put simply, where the '163 Patent seeks to apply the same processing steps to packets of a message, Kerr actively seeks to ***avoid*** applying the same processing steps to common packets. Kerr is an IP router and, as such, its goal is to apply routing decisions to incoming IP packets. Kerr seeks to optimize this process by caching routing decisions applied to packets sharing the same flow characteristics, so those routing decisions do not have to be calculated and executed again for subsequent packets that share those flow characteristics.

Ex. 4 (Patent Owner Comments to October 1, 2012 Action Closing Prosecution) at 30-31.

That discussion is a far cry from a clear disavowal of claim scope.  First, prosecution history disclaimer must be clear and unmistakable.  *See Mass. Inst. of Tech.*, 839 F.3d at 1119; *01 Communique Lab., Inc. v. LogMeIn, Inc.*, 687 F.3d 1292, 1297 (Fed. Cir. 2012).  Second, prosecution history disclaimer generally only applies if the claim limitation is the same in the construed claim. *See Regents of Univ. of Minn. v. AGA Med. Corp.*, 717 F.3d 929, 943 (Fed. Cir. 2013) ("In general, a prosecution disclaimer will only apply to a subsequent patent if that patent contains the same claim limitation as its predecessor.").

Defendants' construction fails on both fronts.  The passage is describing Kerr in broad strokes, not in respect to any specific claim limitation, and it does not attempt to limit the invention of the ancestor '163 Patent.  Even so, the '163 Patent and the Asserted Patents have different claims with different "processing" limitations—cutting against Defendants' construction.  *Compare, e.g.*, '163 Patent at claim 1 (using sequence of components for processing patents) with '683 Patent at claim 1 (processing using routines indicated in stored path).  Further, the "distinguishing"

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description of the ancestor '163 Patent is not definitive: "the '163 Patent ***seeks*** to apply the same processing steps." The patentee did not *mandate* applying the same processing steps by using the permissive word "seeks"—denoting an ***attempt*** to apply the same steps, but not requiring it.

Likewise, stating that Kerr "seeks to avoid applying the same processing steps" does not mean that the '163 Patent (and its asserted children) should cover the converse of that proposition. That is a logical fallacy. At most, the description of Kerr means simply what it states: that Kerr does not apply the same processing steps to subsequent packets.  But Implicit never alleged that this is how the asserted claims operate.  Indeed, the asserted claims were never purported to cover a system that avoids processing subsequent packets with the same steps.  Instead, the claim language itself dictates the processing of subsequent packets in the message.

At bottom, Defendants' construction is unnecessary, convoluted, and unhelpful. Further, the description of Kerr in the prosecution history of an ancestor patent should not limit a descendant patent with different claims—especially when the limitations in the asserted claims address Defendants' double negative construction.

### E.      the packet of the message

| Plaintiff's Proposed Construction | Defendants' Proposed Construction |
|---|---|
| Plain and ordinary meaning.  No construction necessary.  Alternatively:<br><br>the one or more received packets of the message used to create a path | the received packet of the message that was used to create the path |

The parties dispute whether "the packet of the message" of claim 9 refers to a single packet or one or more packets.  It is black letter law that when the claims of a patent use the article "a" or "an," they refer to one or more. *TiVo, Inc. v. EchoStar Commc'ns Corp.*, 516 F.3d 1290, 1303 (Fed. Cir. 2008).  Claim 1 uses the indefinite article "a" when referring to "a received packet of a

message."  The Court held in *Trend Micro* that the antecedent basis for Claim 9's "the packet of

the message" is Claim 1's "a received packet of a message."  The packet referred to in Claim 9

therefore necessarily includes Claim 1's "one or more" character.  During the P.R. 4-3 meet and

confer process, NetScout and Sandvine communicated that the intent behind their proposed

construction was to exclude the claim from covering "one or more" packets of the message.  For

the foregoing reasons, Implicit respectfully requests that the Court apply black letter to law to

Claims 1 and 9 and hold that "a received packet of a message" in Claim 1 and the "the packet of

the message" in Claim 9 (whose antecedent basis is Claim 1) includes "one or more" packets of a

message by virtue of Claim 1's use of the article "a."

### F.        "execute a Transmission Control Protocol (TCP)" and related TCP terms

| Plaintiff's Proposed Construction | Defendants' Proposed Construction |
| --- | --- |
| Plain and ordinary meaning.  No construction necessary. | operate on one or more packets whose outermost header is a TCP header at the endpoint of a connection |

The Defendants also seek to construe a host of protocol-related terms primarily to add three

limitations: (1) that the packet must have an "outermost header" that corresponds to a header for

the protocol; (2) that "executing" a protocol requires implementing "at least the minimum

requirements" in an "RFC" that defines the protocol; and (3) for the Transmission Control Protocol

("TCP"), execution of TCP must occur at the endpoint of a connection.[4]  These limitations are

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[4] These terms are "execute a Transmission Control Protocol (TCP)," "executable to perform a
Transmission Control Protocol," "execute a second, different protocol," "execute a third, different
protocol," "convert one or more packets having a TCP format into a different format," "convert
one of the packets of the message into a different format," "convert one or more packets in a
transport layer format into a different format," "convert packets of the different format into another
format," "execute a Transmission Control Protocol (TCP) to process packets having a TCP
format," "execute TCP to process at least one of the subsequent packets have a TCP format,"
"execute a second protocol to process packets have a format other than the TCP format, wherein

improper for the reasons below.  Defendants' limitations are also unlikely to assist the jury because

they include concepts that do not explain claim terms, but layer jargon onto otherwise readable

claim language.   And, because these limitations can be understood in view of the Court's

construction of other claim terms, such as "processing . . . packets," additional construction is not

necessary or required.

*Outermost Header*.   There is no requirement that the header of interest for a particular

packet must be the "outermost" header of the packet.  Nothing in the plain language of the term

"protocol," which simply refers to a set of rules or procedures for transmitting data between

electronic devices, requires the Defendants' limitation.  The intrinsic record also does not mandate
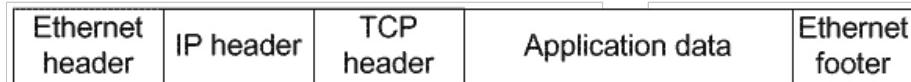
the Defendants' constructions.

The Asserted Patents demonstrate that the Defendants have an overly narrow view of the

claims.  "Differences among claims can . . . be a useful guide in understanding the meaning of

particular claim terms," *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc),

and those differences here point away from the Defendants' construction.  A number of claims

expressly recite the use of the "outermost header" in processing, while the balance of the claims

lack that limitation.  That includes pairs of independent and dependent claims.  Claim 16 of the

'683 Patent, for example, recites "a particular routine that is used to execute a protocol to convert

packets."  '683 Patent, claim 16.  Dependent claim 20 specifically limits that particular routine to

one that "convert[s] packets by removing an outermost header of the packets."  *Id.*, claim 20.

Likewise, claim 1 of the '683 Patent broadly recites "process[ing] subsequent packets," while

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the second protocol is an application-level protocol," and "another session associated with a
different protocol that is executed, and where in the different protocol corresponds to the different
format."

claim 24 more narrowly covers "process[ing] subsequent packets . . . including by removing an outermost header of a given packet using a first routine . . . and by removing the resulting outermost header using a second routine."  *Id.*, claims 1 and 24.  These differences in the claims strongly suggest that the Defendants' "outermost" limitation is improper.

The specification also weighs against the Defendants' construction.  An example packet with (like most packets) multiple headers illustrates the gist of the Defendants' constructions and why they are so narrow.  The example packet below has three headers, an Ethernet header, an Internet Protocol ("IP") header, and a TCP header:

| Ethernet header | IP header | TCP header | Application data | Ethernet footer |
| --- | --- | --- | --- | --- |

Under the Defendants' constructions, the packet above is formatted for the Ethernet protocol because the Ethernet header is the outermost header—but the packet is not formatted for TCP or IP.  If the Ethernet header is removed, such that the IP header is now the outermost header, the packet is then formatted for IP under the Defendants' construction.  Similarly, if the IP header is removed, then the TCP header is now the outermost header and the packet is formatted for the TCP protocol under the Defendants' construction.

The specification discloses a "single copy" embodiment that does not use the "outermost" headers, as the Defendants' constructions requires.  '683 Patent at 14:10-16.  In that embodiment, "a reference to a single copy of the message can be passed to each conversion routine or demuxkey routine."  *Id.* To operate on the packet, "[t]hese routines can advance the reference past the header information for the protocol so that the reference is positioned at the next header."  *Id.*  By advancing the reference pointer, and not removing the prior headers, the header-of-interest for a conversion routine is not the "outermost" header and thus would not be covered by the Defendants' construction.  The Defendants' construction would read that embodiment out of the patent, and it

is incorrect for that reason as well.  *Kaneka Corp. v. Xiamen Kingdomway Grp. Co.*, 790 F.3d 1298, 1304 (Fed. Cir. 2015) ("A claim construction that excludes a preferred embodiment is 'rarely, if ever, correct.'  A construction that excludes all disclosed embodiments . . . is especially disfavored.") (internal quotation omitted).

*Execute a Protocol*.  The Defendants are also incorrect that executing a protocol requires implementing at least the minimum requirements as specified in a Request for Comments ("RFC") document.  Again, a protocol typically refers to a set of rules or procedures for transmitting data between electronic devices, and that protocol may or may not be standardized in an RFC.

The claims themselves recite what protocol functionality needs to be executed to perform a particular task, for example:

- "*execute* a Transmission Control Protocol (TCP) *to convert* one or more packets having a TCP format into a different format" ('683 Patent, claim 1) (emphases added)

- "*execute* a second, different protocol *to convert* packets of the different format into another format; and a third routine that is used to *execute* a third, different protocol *to further convert* the packets" ('683 Patent, claim 2) (emphases added)

- "a session associated with a transport layer protocol that *is executed to convert* one or more packets in a transport layer format into a different format" ('683 Patent, claim 10) (emphases added)

- "*execute* a Transmission Control Protocol (TCP) *to process* packets having a TCP format" ('104 Patent, claim 1) (emphases added)

- "*execute* a second protocol *to process* packets having a format other than the TCP format, wherein the second protocol is an application-level protocol" ('104 Patent, claim 3) (emphases added)

Nothing in this claim language suggests that the "minimum requirements" of a protocol defined in an RFC must be performed.  All that is required by the claims is that a protocol (*e.g.*, a TCP) is used to perform a task, such as converting packets or processing packets.

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Indeed, Defendants would read the "to convert" or "to process" language out of the claims. If the claim limitation to execute a protocol were intended to strictly require that every step of the protocol be executed as specified in an RFC, there would be no need for the "to convert" or "to process" language.  That reality strongly suggests that Defendants' constructions are incorrect. *E.g.*, *Digital Vending Servs. Int'l, LLC v. Univ. of Phoenix, Inc.*, 672 F.3d 1270, 1275 (Fed. Cir. 2012) ("If 'registration server' were construed to inherently contain the 'free of content managed by the architecture' characteristic, the additional 'each registration server being further characterized in that it is free of content managed by the architecture' language in many of the asserted claims would be superfluous. This construction is thus contrary to the well-established rule that 'claims are interpreted with an eye toward giving effect to all terms in the claim.' *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006).").

Nothing in the claim language specifies that a protocol applied is one specified by an RFC standard, as opposed to another type of protocol. Nothing in the claim language suggests that the entire protocol as specified by an RFC standard must be performed. And nothing in the claim language suggests that a packet must be converted into a specific type of format.  Yet Defendants read all these unclaimed limitations into the claims.

The focus of Defendants' constructions is on TCP and the TCP standard.  The specification, however, does not discuss the TCP standard and does define any claim term by reference to the TCP standard. The specifications of the Asserted Patents make no mention whatsoever of the TCP "specification" or "standard": those words do not appear anywhere in the patent specifications. The specifications' references to TCP protocols and sessions are included within disclosures explaining how the invention works with TCP traffic and packets in TCP format. *E.g.*, '683 Patent at 1:35-36. Indeed, many of the patent claims explicitly refer to a "TCP format." The TCP standard

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has nothing to do with the demultiplexing inventions of the patent, which involve converting data from one format to another and can operate on data in a "TCP format."

Moreover, the TCP claim elements explicitly require a single routine to execute/perform a Transmission Control Protocol to effect a specific format conversion.  In this way, the TCP specification is like a toolkit, with various tools available to a user of TCP.  Some of these tools work together in important ways—others are simply different tools that, when used together, meet the full TCP specification.  When the claims require a single routine used to execute a single Transmission Control Protocol to perform the claimed conversion, they require only making use of the TCP specification to the extent necessary to perform the recited conversion. This is an ordinary use of the English language. If one was asked to use a toolkit to hang a family photo, they would understand that they needed to use only the tool(s) necessary to get the prescribed job done, and nothing more.

The specification confirms this understanding.   The patent discusses "edges" corresponding to conversion routines, where each edge is the part of a protocol, or component, necessary to effect a conversion—and nothing more:

> FIG. **4** is a block diagram illustrating example path data structures in one embodiment. The demux component identifies a sequence of "edges" for converting data in one format into another format by invoking the label map get component. 35 Each edge corresponds to a conversion routine for converting data from one format to another. As discussed above, each edge is part of a "protocol" that may include multiple related edges. For example, a protocol may have edges that each convert data in one format into several different formats. Each 40 edge has as an input format ("input label") and an output format ("output label"). Each rectangle represents a session **410, 420, 430, 440, 450** for a protocol. A session corresponds to an instance of a protocol. That is, the session includes the protocol and state information associated with that instance 45 of the protocol. Session **410** corresponds to a session for an Ethernet protocol; session **420** corresponds to a session for an IP protocol; and sessions **430, 440, 450** correspond to sessions for a TCP protocol. FIG. **4** illustrates three paths **461**,

'683 Patent at 5:32-49.  As described, each edge corresponds to a conversion routine for converting

data from one format to another.  A conversion routine is not the entire TCP specification.  Each

edge is part of a protocol that may include a single conversion routine or other conversion routines

for converting data into several different formats.  *Id.*  Additionally, Figure 4 shows incoming and

outgoing data, indicating that a path can include only the TCP routines necessary to encode or

decode data.

The invention is a flexible and efficient operating system that dynamically processes

packetized data in various formats.  Where the claims call for only a single conversion routine,

and the specification discusses linking different conversion routines for converting data into

several different formats, limiting the claims to the entire TCP specification is anathema to the

spirit and purpose of the invention.

In sum, the intrinsic record does not support Defendants' requirement that executing a

protocol requires implementing at least the minimum requirements as specified in a Request for

Comments ("RFC").  Notably, the defendant in *PAN* raised a similar argument at the summary

judgment stage, Dkt. No. 201 at 3-13, and the Court denied the motion.

     ***Endpoint of a Connection.***  The Court should also reject this portion of the Defendants'

construction, which relates to the TCP-related terms.  The defendant in the recent *PAN* case raised

this same argument at the summary judgment stage, Dkt. 201 at 11-14, and the Court denied the

motion.  Implicit respectfully requests that the Court reject the argument again.

     The intrinsic record does not limit the claims to endpoint connections.  The claims do not

include the term "endpoint" or restrict the invention to a particular class of apparatuses.  The

specification does not recite an "endpoint," let alone a definitional statement to import that

limitation into the claims.

     Moreover, the specification discloses that the system contemplated by the claims can sit

between two endpoints, the source of the data and the consumer of the data.  The specification

discloses a home "central controller" system expected to "process data received via telephone

lines, cable TV lines, and satellite connections in many different formats" (*i.e.*, process data

received from a source endpoint) and then "output the data to computer displays, television

displays, entertainment centers, speakers, recording devices, and so on in many different formats"

(*i.e.*, output the data to a destination endpoint).  '683 Patent at 1:59–66.  An object of the invention

is to provide a new technique that allows devices, such as that controller, to do so.  *Id.* at 2:4-11.

Indeed, a number of the devices that Implicit (then known as BeComm) designed were these types

of intermediary devices, such as media relays, Internet gateways, and other intermediate devices

in connected home."  Ex. 5 (depicting a media relay device); Ex. 6 (depicting a media server for

use as a gateway); Ex. 7 at 10-14 (describing a media gateway in a Strings connected home as part

of proposal to Comcast).

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The Defendants' proposed construction appears to flow from extrinsic evidence about how TCP can be utilized, which may be in communications between two endpoints. But the same extrinsic evidence that the Defendants rely upon (*e.g.*, the Tannenbaum textbook) also shows that intermediate devices can utilize TCP processing, such as a TCP "snooping agent" that sits between two endpoints (a mobile host and a sender), Ex. 8 at 544, or an in-line firewall that can attempt to block TCP connections and utilize an application gateway to examine application data (such as an email) sent between endpoints. *Id.* at 411. All of this reinforces what the intrinsic record already conveys: the claims of the Asserted Patents are not limited to endpoints.

## VI.   <u>CONCLUSION</u>

For the foregoing reasons, Implicit respectfully requests that the Court enter an order adopting Implicit's proposed constructions and rejecting the positions advanced by Defendants in their constructions.

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Respectfully submitted,

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## **CERTIFICATE OF SERVICE**

The undersigned certifies that the foregoing document is being filed electronically in compliance with Local Rule CV-5(a).  As such, this document is being served on all counsel who are deemed to have consented to electronic service.  Local Rule CV-5(a)(3)(V).  Pursuant to Federal Rule of Civil Procedure 5(d) and Local Rule CV-5(d) and (e), any counsel of record not deemed to have consented to electronic service will be served with a true and correct copy of the foregoing by email on this 20th day of February 2019.

/s/ William E. Davis, III
William E. Davis, III

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